AUTODOC CLUB

How to change rear coil springs on **BMW 3 Touring (E91)** – replacement guide

SIMILAR VIDEO TUTORIAL



This video shows the replacement procedure of a similar car part on another vehicle

Important!

This replacement procedure can be used for:
BMW 3 Touring (E91) 325i 3.0, BMW 3 Touring (E91) 318d 2.0, BMW 3 Touring (E91) 318i 2.0, BMW 3 Touring (E91) 320i 2.0, BMW 3 Touring (E91) 325i 2.5, BMW 3 Touring (E91) 330i 3.0, BMW 3 Touring (E91) 320d 2.0, BMW 3 Touring (E91) 330d 3.0, BMW 3 Touring (E91) 335i 3.0, BMW 3 Touring (E91) 335d 3.0

The steps may slightly vary depending on the car design.

This tutorial was created based on the replacement procedure for a similar car part on: BMW 3 Coupe (E92) 330i 3.0

REPLACEMENT: COIL SPRINGS – BMW 3 TOURING (E91). TOOLS YOU NEED:



- Wire brush
- WD-40 spray
- Brake cleaner
- Copper grease
- Combination spanner #18
- Drive socket # 17
- Drive socket # 18
- Drive socket # 21
- Wheel impact socket #17
- Ratchet wrench
- Torque wrench
- Tap wrench
- Pin punch
- Rubber mallet
- Crow bar
- Strut spring compressor
- Hydraulic transmission jack
- Wheel chock

Buy tools

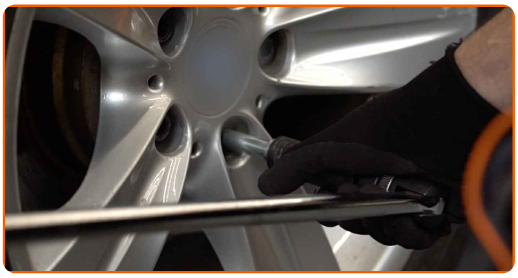
Replacement: coil springs – BMW 3 Touring (E91). Tip from AUTODOC experts:

- Both coil springs of the rear suspension should be replaced simultaneously.
- The replacement procedure is identical for the left and right coil springs of the rear suspension.
- Please note: all work on the car – BMW 3 Touring (E91) – should be done with the engine switched off.

CARRY OUT REPLACEMENT IN THE FOLLOWING ORDER:

1 Secure the wheels with chocks.

2 Loosen the wheel mounting bolts. Use wheel impact socket #17.



3 Raise the rear of the car and secure on supports.

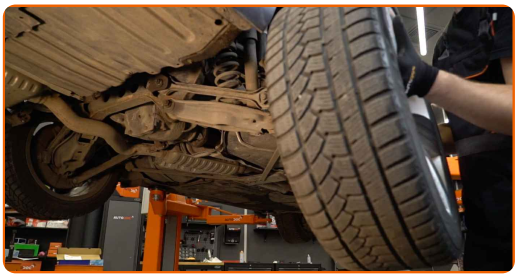
4 Unscrew the wheel bolts.



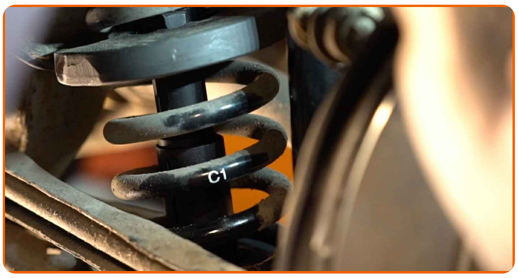
AUTODOC recommends:

- Warning! To avoid injury, hold the wheel while unscrewing the fastening bolts. BMW 3 Touring (E91)

5 Remove the wheel.



6 Install the coil spring compressor on the coil spring.

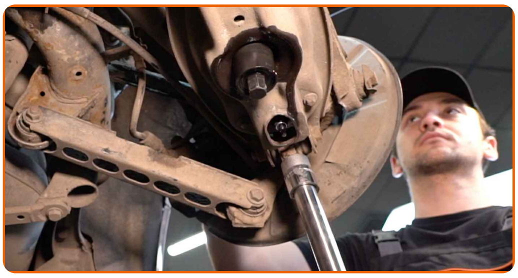


Replacement: coil springs – BMW 3 Touring (E91). Professionals recommend:

- Use adapters and jaws of the appropriate size.
- The sping coils should be securely fixed with the coil spring compressor.
- Use high quality coil spring compressors.

7

Support the arm. Use a hydraulic transmission jack.



8

Compress the spring.

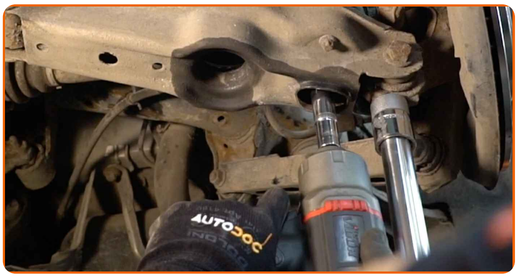


Replacement: coil springs – BMW 3 Touring (E91). AUTODOC recommends:

- Compress the coil spring compressor until there is enough room to remove the spring. Do not compress the tool to the full: the spring coils must not touch each other.
- Be careful. The compressed spring is powerful and in case of disrupting ties, straightening, it can cause injury.

9

Unscrew the lower fastener of the shock absorber. Use a drive socket #17.



10 Remove the support from under the arm.



AUTODOC recommends:

- Replacement: coil springs – BMW 3 Touring (E91). Lower the transmission jack smoothly, without jerks, to avoid damaging components and mechanisms.

11 Clean all joints of the arm. Use a wire brush. Use WD-40 spray.



12 Make a mark on the camber adjustment bolt.



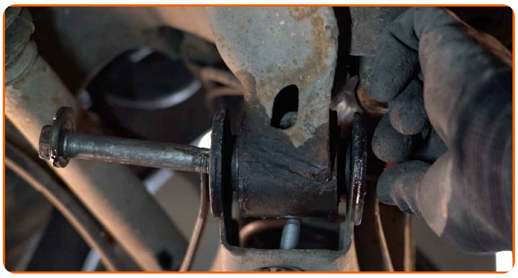
13 Unscrew the fastener connecting the control arm to the rear subframe. Use a drive socket #18. Use a drive socket #21. Use a ratchet wrench. Use a tap wrench.



14 Support the arm. Use a hydraulic transmission jack.



15 Remove the fastening bolt. Use a pin punch. Use a rubber mallet.



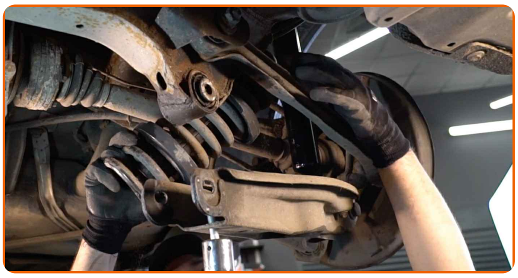
16 Lower the hydraulic transmission jack by 10-15 cm.



AUTODOC recommends:

- BMW 3 Touring (E91) – Do not lower the transmission jack sharply to avoid damaging components and mechanisms of the car.

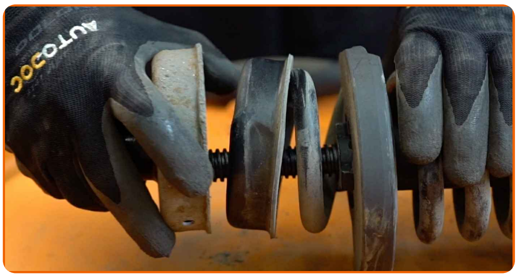
17 Pull down the suspension control arm. Remove the coil spring together with the coil spring compressor.



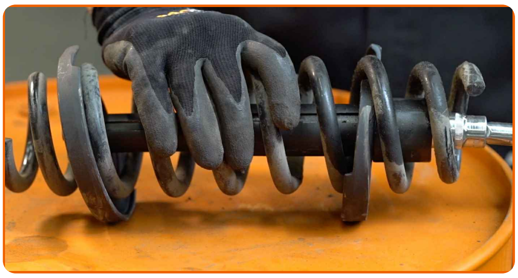
Replacement: coil springs – BMW 3 Touring (E91). AUTODOC recommends:

- While the spring is compressed, do not do any operations on it.

18 Remove the rubber spring spacer.



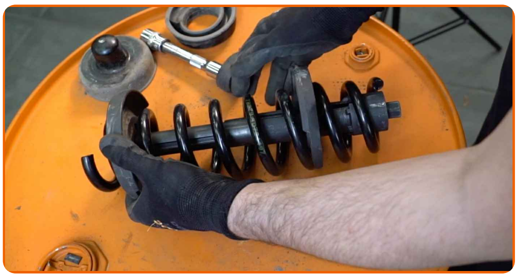
19 Release the coil spring.



20 Remove the spring.



21 Install a new coil spring on the coil spring compressor.



Replacement: coil springs – BMW 3 Touring (E91). Tip:

- Use adapters and jaws of the appropriate size.

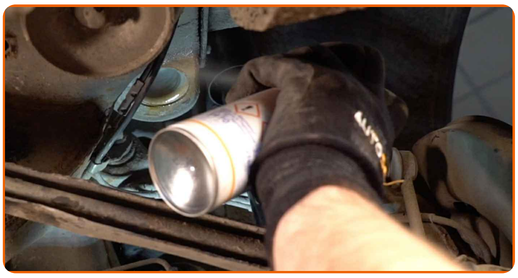
22 Compress the spring.



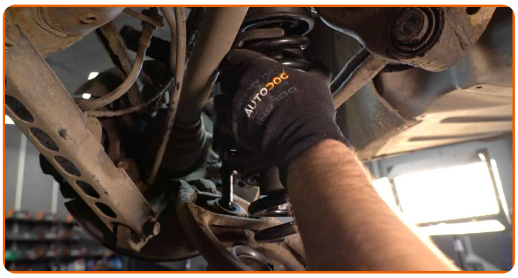
23 Install the rubber spacer on the new coil spring.



24 Clean the coil spring mounting seats. Use a wire brush. Use WD-40 spray.



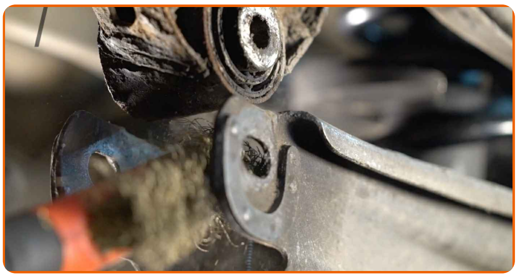
25 Pull down the suspension control arm. Install the spring.



AUTODOC recommends:

- Make sure that the coil spring is correctly positioned in its mounting seats.

26 Clean the mounting seats and the thread of the suspension arm. Use a wire brush. Use WD-40 spray.



27 Support the arm. Use a hydraulic transmission jack.



28 Install the fastening bolt. Use a crowbar.



29 Remove the support from under the arm.



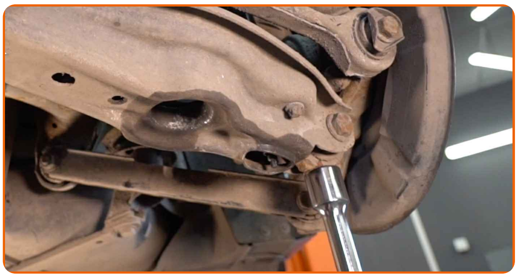
AUTODOC recommends:

- Replacement: coil springs – BMW 3 Touring (E91). Lower the transmission jack smoothly, without jerks, to avoid damaging components and mechanisms.

30 Remove the coil spring compressor.



31 Support the arm. Use a hydraulic transmission jack.



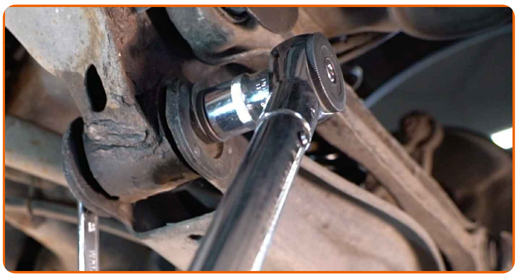
32

Screw in the lower fastener of the shock absorber. Use a drive socket #17.



33

Tighten the fastener connecting the control arm to the rear subframe. Use a combination spanner #18. Use a drive socket #21. Use a torque wrench. Tighten it to 165 nm torque.

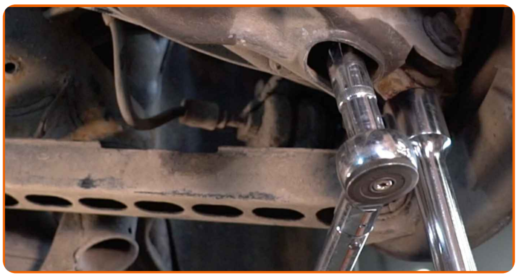


AUTODOC recommends:

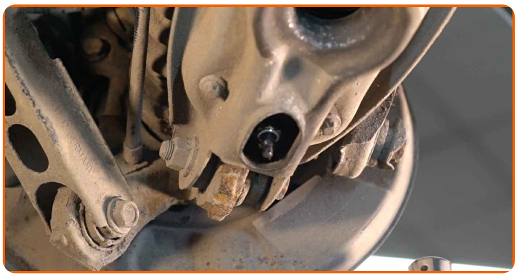
- Important! Be sure to use new fasteners.

34

Tighten the lower fastener of the shock absorber. Use a drive socket #17. Use a torque wrench. Tighten it to 60 Nm torque.



35 Remove the support from under the arm.

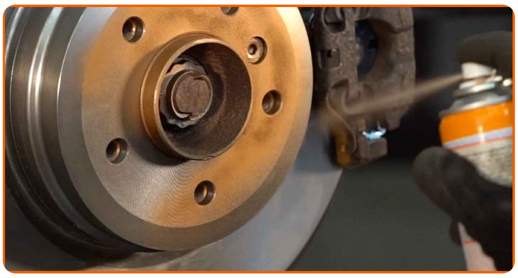


AUTODOC recommends:

- BMW 3 Touring (E91) – Do not lower the transmission jack sharply to avoid damaging components and mechanisms of the car.

36 Treat all joints of the arm. Use copper grease.

37 Treat the surface where the brake disc contacts the wheel rim. Use copper grease.



38 Clean the brake disk surface. Use a brake cleaner.



AUTODOC recommends:

- After applying the spray, wait a few minutes.

39 Install the wheel.



AUTODOC recommends:

- Warning! To avoid injury, hold the wheel while screwing in the fastening bolts on the car. BMW 3 Touring (E91)

40 Screw in the wheel bolts. Use wheel impact socket #17.



41 Lower the car and working in a cross order, tighten the wheel bolts. Use a torque wrench. Tighten it to 120 nm torque.



42

Remove the jacks and chocks.

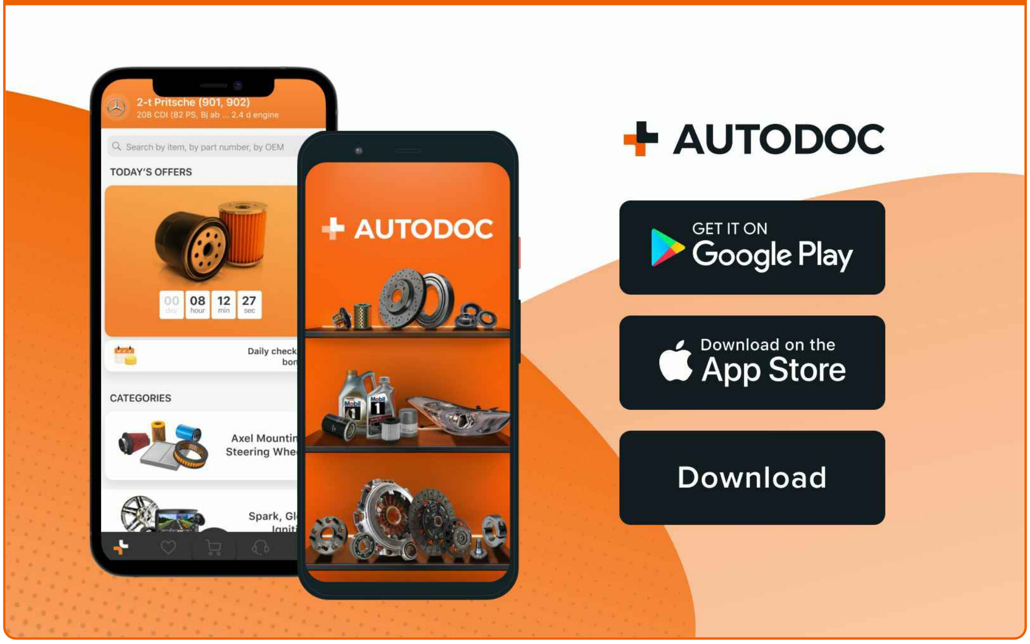


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